

# [Chapter 8 complexity, learning and innovation](https://assignbuster.com/chapter-8-complexity-learning-and-innovation/)

learning organizationinnovation and change are seen as routine and as inputs for further learningmanagement theories reflect the \_\_\_\_\_\_\_\_\_\_\_ of their timegoverning ideas ONCHAPTER 8 COMPLEXITY, LEARNING AND INNOVATION SPECIFICALLY FOR YOUFOR ONLY$13. 90/PAGEOrder Nowcomplex systemsarrangements of interacting interdependent parts that produce emergent behavior3 characteristics of complex systems that make them unpredictable and challenging to manage1. richly interconnected   
2. non linear   
3. dynamicrichly interconnectedsystem elements are connected in many different waysnon linearoutput is not directly proportional to inputlinearoutput is directly proportional to inputdynamicsystems have capacity to change and can influence present eventspolicy resistancetendency for interventions to be delayed, diluted, or defeated by the response of the system to the intervention staffemergencewhen organizations operate at edge of chaos, new ideas, products, practices can spontaneously emergecombinatorial complexity/detail complexityarises from the number of constituent elements of a system or number of interrelationships that might exist among themdynamic complexitytwo operation of feedback loopstwo types of feedback loops1. reinforcing feedback loop   
2. balancing feedback loopreinforcing feedback loopamplify or intensify whatever is happening in a system, drive system toward disequalibriumbalancing feedback loopcounteract or oppose whatever is happening in a system, drive system toward equalibriumvirtues of systems dynamics models1. permit controlled experimentation, enabling managers to test strategies and learn more rapidly than the real world permits   
2. simulations relax the performance pressure of the real world, creating a safe environment to explore " what if" scenarioslearninginvolves the acquisition of knowledge or skills through study, instruction, or experience. it is a feedback processsingle loop learningrelatively simple error and correction process whereby problem solvers look for solutions within an organization's policies, plans, values and rulesdouble loop learningproblem solvers attempt to close the gap between desired action and actual states of affairs by questioning and modifying those polices, plans, values and rulesadaptive learningproblem solvers adjust their behavior and work processes in response to changing events or trends, promoted by single loop learninggenerative learningattempt to solve problems by changing the underlying structure of a system, promoted by double loop learningPeter Senge's " The Fifth Discipline", 5 management practices that characterize learning organization1. systems thinking   
2. personal mastery   
3. mental models   
4. shared vision   
5. team learningsystems thinkingdiscipline of seeing wholes, perceiving the structures that underlie dynamically complex systems and identifying high-leverage change opportunitiespersonal masterydiscipline of individual learning, involves continuously clarifying our individual sense of purpose and vision, and continuously learning how to see the world as it is without distortionmental modelsconstantly surfacing, testing and improving assumption about how the world worksshared visiongenerating an answer to the common question " what do we want to create?" connects people through common aspiration and drives motivational power by tapping peoples personal visionsteam learningcreating alignment such that team members think insight fully about complex problems, synergize knowledge and skills, and produce coordinated actionhow we think learning happens1. learning is an individual activity   
2. linear process involving a one way transfer of knowledge and best practice   
3. repetition is the path to best practice   
4. learning occurs through error detection and correctionhow learning really happens1. individual, group, and organization activity   
2. cyclical process involving knowledge interpretation, application, feedback, reinterpretation, and refinement   
3. repetition is necessary   
4. occurs through error detection and correctioninnovationidea or practice or object that is perceived as new by an individual or unit adopting ithalo effecttendency to infer specific characteristics of a person or organization from our overall impressionslinear progressionone stage follows another in a predictable, orderly fashionMIRPMinnesota Innovation Research Projectdiscoveryinnovators learn about possible action alternatives, outcome preferences, and contextual factorsnew relationships emerge by establishing four key conditions1. direction   
2. boundaries   
3. permission   
4. resourcesspecific practices for nurturing foresight include: 1. rapid experimentation using prototypes, pilot programs and computer simulations   
2. knowledge brokering - making connections between ideas   
3. alliances with existing and potential customers and other firms   
4. regular and internal meeting to engage in cross functional dialogueLouis Pasteur" in fields of observation, chance favors the prepared mind" Schoemaker and Gunther suggest three factors in regards to change: 1. potential gain to the potential cost   
2. test core assumptions that drive large numbers of decisions   
3. conditions have changed